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# **Promoting Fruit and Vegetable Consumption**

Are Coupons More Effective Than Pure Price Discounts?

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The U.S. Department of Agriculture administers food and nutrition assistance programs that promote fruit and vegetable consumption. But consumption remains relatively low, with price cited as the main deterrent.

#### What Is the Issue?

A price-discount strategy in conjunction with existing programs might encourage participants in food and nutrition assistance programs to consume more fruits and vegetables. This study looks at coupons and price discounts, two methods of lowering the cost of fruits and vegetables, and uses household purchase data and a consumer demand model to determine which method may be more successful in encouraging produce consumption.

## What Did the Study Find?

Coupons influence consumer behavior through a dual effect—a price-discount effect and an informational advertising effect. Because of this dual effect, the use of a coupon to increase fruit and vegetable purchases may be more effective than a pure price-discount policy or other noncoupon promotion.

- For a 10-percent coupon usage rate, lowering prices by 10 percent with a coupon would increase average weekly quantity purchases by 2 percent for fruits and 2.1 percent for vegetables. (A "coupon usage" rate is defined as the percentage of purchases in which households use the coupon when buying fruits and vegetables in a given time period.) A 30-percent usage rate simulation shows a larger effect—over 6 percent for fruits and over 6.5 percent for vegetables—while a 50-percent usage rate shows just over a 10-percent effect for both fruits and vegetables.
- By comparison, a pure price discount of 10 percent would likely have about a 6-percent effect for both fruits and vegetables.
- If coupon usage turned out to be less than 30 percent, then the overall effect of coupons would be lower than a pure price discount policy because the price discount applies to everybody (it has a 100-percent usage rate).
- The informational effect of coupons might decline as coupon use became more common or if coupons were distributed electronically instead of in paper form.
- Even a 10-percent increase in purchases of fruits and vegetables—the result assuming the highest coupon usage rate—would still leave consumption at about 65 percent of the recommended level of 5 or more servings a day.

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The success of attempts to use coupons to increase consumption of fruits and vegetables by low-income households would depend on the distribution method (paper or electronic), on the number of households that actually use the coupons, on the size of the discount offered by the coupon, and on the coupon's ease of use.

## **How Was the Study Conducted?**

This analysis relies on data from the 2004 Nielsen Homescan panel. The data include household purchase information for fruits and vegetables, coupon usage information, and households' demographic characteristics. The 2004 panel was made up of 8,482 households that reported purchases of products marked with bar codes as well as other purchases.

To estimate the dual effect of coupons on fruit and vegetable demand, the marked purchase renewal model was used, including three variables that may affect purchase quantity and/or frequency: (1) the gross price paid, (2) an indicator variable that tracks whether a coupon was used, and (3) the value of a redeemed coupon used during a given shopping trip. Elasticity estimates from the analysis then were used to conduct a simulation to compare the effect of coupons as compared with a pure price discount on fruit and vegetable purchase behavior.